fastly

Three Priorities for eCommerce Digital Transformation

In 2015, Amazon.com opened a physical bookstore in the same city where its corporate headquarters are located, Seattle, Washington. The retail and tech industries collectively scratched their heads. Conspiracy theories abounded. But Amazon simply came out with it: according to Amazon Books Vice President in 2015, Jennifer Cast, "what we realized was that we had 20 years of data — about why customers buy, how they buy, what they read, how they read and why they're reading it — that could make a physical bookstore just a different and better place to discover books." This is the essence of an omnichannel strategy: using data and research to deliver a delightful experience *wherever and whenever* your customers are interacting with your company. The good news is that most of this is old news — successful retailers have been delighting customers for decades. Now all they need to do is master the wherever and whenever part.

For retail companies grappling with the incessant chatter about digital transformation and the need to "evolve or die," focusing on their customers first and foremost has always been a winning strategy. The drive to Omnichannel is merely an evolution of that focus, which is driven by the recent surge in mobile devices and all the data and connectivity they provide. In this short e-book, we cover the key details for e-commerce and retail organizations planning their omnichannel strategy.

Meeting your customers where they are

A 2016 study by the Harvard Business Review of 46,000 shoppers revealed the power of an omnichannel strategy. They found that multi-channel shoppers "spent an average of 4% more on every shopping occasion in the store and 10% more online than single-channel customers." They used retailers' channels and touchpoints in a variety of ways and combinations: "Not only did they use smartphone apps to compare prices or download a coupon, but they were also avid users of in-store digital tools such as an interactive catalog, a price-checker, or a tablet. They bought online and picked-up in store, or bought in the store and got their purchases shipped." Even more compelling, with every additional channel they used, the shoppers spent more money in the store. For example, customers who used 4+ channels spent 9% more in the store, on average, when compared to those who used just one channel.

These data alone suggest how valuable multiple channels are to your business. How and when you use them is the crux to delivering delightful customer experiences. So how do you know which channels your customers are using, and where and when? You simply need one age-old retail tactic: research.

Map your customer journey(s)

Understanding your customer's experience is also old hat for retailers — it's why the milk is still at the back of the grocery store — but it's experiencing quite the resurgence with a focus on digital experiences across numerous devices and locations. Customer maps (aka customer "journeys") are far more complex and data-driven than they used to be, but don't let that deter you. The best approach is to pick one journey based on business or strategic priorities and start with that one. Here's a brief overview of the process (for excellent in-depth detail, be sure to check out this video from Moz).

Start visual

Once you've picked your priority journey, find a whiteboard and a stack of notecards or sticky notes. A map is a visual tool, and you'll want to build it that way from the beginning. Your goal is to identify and write down all the touchpoints for your customer during that journey — it might be the path from landing on the site to checkout, or perhaps the process of receiving a sales email and how they proceed through the sales funnel from there — and write each one on a card.

Include all necessary stakeholders

Odds are you likely won't be able to identify all the touchpoints on your own. This is the first, but not the only, reason to include as many relevant stakeholders from your organization as possible. From marketing to product, sales, customer service, and more, be sure anyone involved in that customer journey is involved. They'll be critical to the next step, which is modelling your customers' experience.

Get in your customers' shoes

For each card denoting a touchpoint, write on it what customers are trying to do at that point, and what they might be thinking and feeling. Some of these touchpoints might be positive experiences (e.g. unboxing their monthly subscription order), some might be less so (e.g. difficulty contacting appropriate customer service help on a mobile device). Your stakeholders can help immensely here — someone from customer service will no doubt know the pain points, and sales and marketing colleagues could have insights into areas of delight.

Collect data

There's a number of data sources you can pull in at this stage. For web experiences, you should have a wealth of traffic data, like page visits, dwell times, abandon rates, and more. Ditto for devices and locations where these touchpoints are occuring, like app downloads or virtual check-ins on devices at physical stores. You'll also want to collect data (mostly qualitative) from your customers' themselves at this point — they'll help you validate your touchpoints and inform on thoughts, feelings and motivations they have across them.

Mind the gap(s)

By this point, your customer journey should be robust enough that you'll be able to find gaps (e.g in content or perhaps even entire touchpoints) and pain points to address. From here you can prioritize digital and related omnichannel efforts to delight customers and take better advantage of certain touchpoints (e.g. nudging a customer about an item they checked out online if they enter your physical store).

There's one often unanticipated benefit of mapping your customers' journey(s). As Kerry Bodine, the host of the Moz video mentioned above, notes, "This is really an effective tool at helping to break people out of their organizational silos, getting them to understand that holistic customer viewpoint across all the different touch points, and getting people within the organization to have empathy for each other, their fellow colleagues, or perhaps external partners, who are all playing a role in delivering this journey." We cover organization dynamics (and how to change them to be best positioned for digital transformation efforts) in the next section.

Organizational change

"The purpose of an organization is to allow ordinary humans to do extraordinary things." — Peter Drucker

Your organization's culture is the linchpin of any digital transformation strategy. While the very word "digital" often leads people to focus on the technical and systems aspects, where your culture currently is versus where it needs to be — hence, the "transformation" term — is the most critical thing you need to consider and start acting on immediately.

What is culture?

In order to evaluate (and work to change) your organizational culture, you must first have a handle on what that culture really is. Culture is a challenging topic, because it can be ephemeral and people tend to have different ideas and definitions of what it really is. In their book, *Accelerate: The Science Behind DevOps: Building and Scaling High Performing Technology Organizations*, co-authors Nicole Forsgren, Jez Humble and Gene Kim posit a model of culture initially developed by sociologist Ron Westrum[1]. It focuses on culture at the level of shared values — these values determine how people communicate and how the organization functions as a whole. Values "provide a lens through which group members view and interpret the relationships, events, and activities around them." These values influence group interactions and individual behaviors — in short, they directly shape your culture. Westrum posits three types of organizations based on their values: Pathological, Bureaucratic, and Generative, shown below:

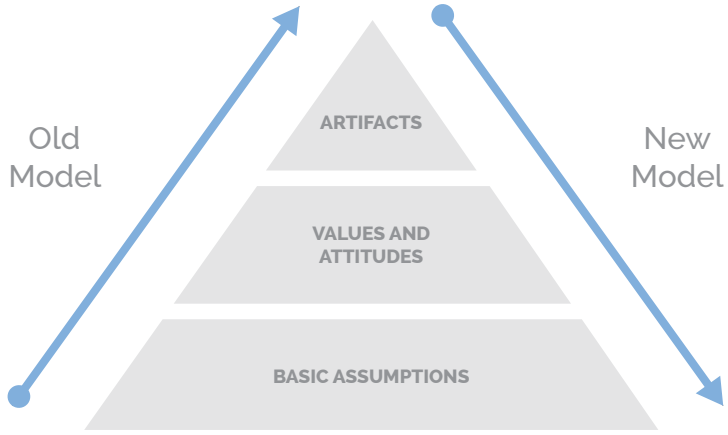
Pathological (power-oriented)	**Bureaucratic (rule-oriented)**	**Generative (performance-oriented)**
Low cooperation	Modest cooperation	High cooperation
Messengers shot	Messengers neglected	Messengers trained
Responsibilities shirked	Narrow responsibilities	Risks are shared
Bridging discouraged	Failure leads to justice	Failure leads to enquiry
Novelty crushed	Novelty leads to problems	Novelty implemented

[1] Accelerate: The Science Behind DevOps: Build ing and Scaling High Performing Technology Organizations (Nicole Forsgren, Jez Humble, Gene Kim), 2018

The key characteristics of healthy organizational culture are trust, quality decision making (based on data and not gut instinct), and the willingness and ability to tackle problems or failures quickly and without scapegoating. Westrum asserted that this model for organizational culture predicts performance outcomes, and the research presented in *Accelerate* backs this up. In fact, Forsgren and her co-authors found that this model of culture predicted both software/IT performance and organizational performance as a whole. So if you want to improve the performance of your organization in order to be able to respond to an ever-changing competitive landscape, you have to change your culture.

Changing your culture

If you've ever tried to change your own personal habits to reflect an new value, like wanting to exercise more or eat healthier, you know that simply stating you will change rarely, if ever, works. Similarly, decreeing a new set of values in a slide deck at your next All Hands meeting will largely foster anxiety and fail to move the cultural needle. To change the way you think and feel, you must change the way you behave. By acting differently and seeing and experiencing your work in a different way, it starts to change the way you think and feel, which changes what you value. And as those values change, so does your culture, and the values and artifacts — things like documents, processes, products — it produces as a result of that culture. A wonderfully detailed example of this in action is in John Shook's retelling of when GM and Toyota opened their first joint auto plant in 1984, and how they turned around one of the worst-performing auto plants in the United States. (There's also a This American Life podcast episode on the same topic.) This is Shook's model for culture change:



Shook focused on giving employees the means by which they could be successful at their jobs. In his words, "It's easier to act your way to a new way of thinking, than to think your way to a new way of acting."

However, humans are inherently bad at large-scale change over a short period of time, so start small and with clear purpose. Most successful organizational transformation efforts have picked a specific, well-defined project with a clear business outcome and used that to drive new behaviors and values into their organization. Courtney Kissler (the former Vice President of E-Commerce and Store Technologies at Nordstrom) gave a detailed talk about how Nordstrom undertook an effort to revamp their mobile app that also helped transform their organizational culture. Her talk covered a number of current leading trends like Lean, Agile, or DevOps — you don't necessarily have to embrace those approaches fully, but you can start with some of their key tenets:

Cross-functional teams

Bringing a diverse set of people together from across your organization to focus on a common problem can lead to new ideas and outcomes, and also reduces the amount of organizational and bureaucratic churn that typically slows down delivery in many organizations. This group should be aligned based on the business goals and desired customer outcomes, and should be communicating frequently with their peers and leadership about their work and progress. Demonstrating success in this approach plants the seed for the rest of your organization to begin to see a new way of working. It's worth noting that this is not an Innovation Center or a secret cabal that disappears to work on "new initiatives" and magically re-appears months later with new ideas or approaches — this project must be visible and transparent to the rest of the organization.

Small batches

You've likely heard of the Minimum Viable Product (MVP) concept, and small batches is at the core of this approach. It's an approach popularized by the Toyota auto line processes, and many people have extended those concepts to software-driven businesses. Instead of yearly, drawn-out planning processes in which you are expected to plan out every single aspect of the project in agonizing detail (and magically deliver it on time and under budget!), work in small iterative batches that focus on demonstrable customer impact. Working in small batches has a number of benefits, including:

1. Reducing the risk of failure
2. Improving control and visibility
3. Providing quicker, better feedback

Experimentation

Barry O'Reilly, co-author of Lean Enterprise, refers to this as "reducing people's learning anxiety." Leadership in your organization needs to be aligned to foster the ability for people to not be afraid to try new things — allow them to experiment and safely fail without retribution. One clear sign that this is happening is when a person or team changes their mind when faced with data indicating their original idea or plan isn't going to achieve what they wanted. This is a key cultural effort where leadership needs to role-model the behavior, so everyone else in the organization witnesses an attitude that is open to change, experimentation, and learning from failure. Scapegoats are the harbinger of a change-averse culture that is not likely to survive and transform.

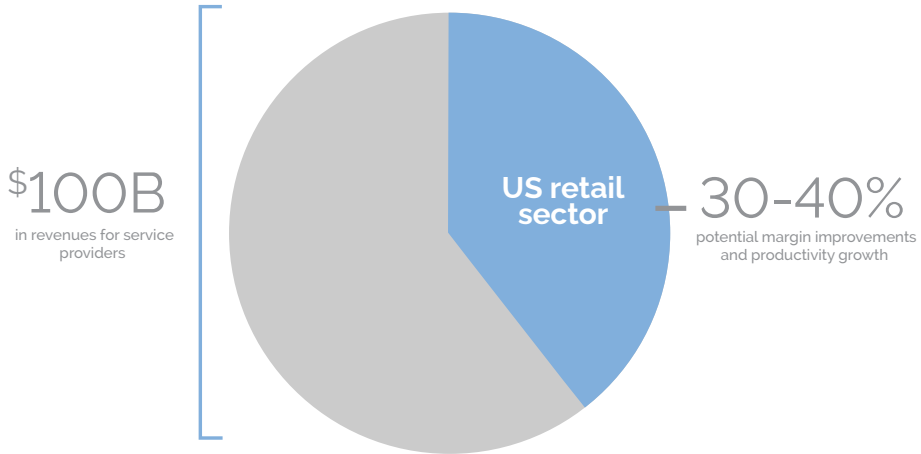
Iteration

By choosing small, achievable projects and treating them like experiments that you use to collect data to inform your direction, you are setting your organization up to move more quickly and react to changes and opportunities in the market. This leads to a mindset where instead of shipping big, annual projects, you are constantly collecting data, reacting, and iterating based on those data.

Harness your data

"It is a capital mistake to theorize before one has data."- Arthur Conan Doyle, Author of Sherlock Holmes

Companies small and large are now floating in a sea of data, besieged by messaging everywhere that they must unleash the power of artificial intelligence (AI) and machine learning (ML) in order to wrangle all their data. But before you go on a spearfishing mission for potential buzzword-laden whales, it's essential to make sure you have your digital data covered. There's a huge amount of value simply in understanding all the data you collect, where it comes from, and what you can do with it. A 2016 report from McKinsey looked back at predictions they had made 5 years earlier about how companies are using data, notably that location-based data could provide at least $100 billion in revenues for service providers — and yet "the US retail sector has realized [only] 30 to 40 percent of the potential margin improvements and productivity growth" from those kind of data opportunities. That's a lot of unrealized upside to your data. The two key areas that McKinsey notes where retail has made strides, but can continue to take advantage of data, are in personalization and location-based services.



Make it (omni)personal

When discussing retail personalization, many people point to Amazon, which pioneered the "People who bought X also bought Y" approach to merchandising. But data-based recommendations are not equivalent with personalization—in many ways, the ideal vision might be more a merger of Amazon's data-driven model with Nordstrom's white glove approach. This notion was highlighted at the National Retail Federation's Big Show earlier in 2018, where many organizations were discussing merging traditional personalization efforts with their omnichannel strategies. Online or mobile offers, no matter how well-tailored they are, lose their impact when a person walks into a store and that information isn't carried with them in some useful way.

Beyond that, personalization efforts are now shifting more in the direction of *customization*: customers are starting to demand unique experiences and products tailored to their tastes and desires (think custom shampoo formulas and home-delivery fashion concierge services), and they implicitly expect companies to have the data and expertise to provide those experiences seamlessly online and off. So as you take a look at what data you have, and how you can use it to provide truly personal experiences, be sure to factor in your omnichannel strategy and how you can be delighting your customers no matter where they are. But in order to do that, you do need to know where they are...

Right here, right now

According to a 2016 survey by the Pew Research Center, 9 out of 10 smartphone users turn to their phones to map where they're going, look up movie locations and times, research in-store availability for products, plan vacations, and countless other activities that take advantage of location-based technologies. They expect the apps they use to know where they are, and present information to them accordingly. This provides a great opportunity for retailers looking to merge online and offline experiences—location can be the glue in your omnichannel strategy, allowing you to deliver the right offer or experience to the right person at just the right moment. But the location-based upside comes with some significant challenges.

Privacy and security

In order to use location-based services, people have to opt in to using the service. Pew also found that between ⅓ to ½ of users (depending on age) don't opt in or ultimately turn these features off. People typically eschew location-based features out of concerns over privacy—they don't want companies knowing where they are going and what they are doing, or they have (valid) concerns about what will be done with those data, and with whom they might be shared. Much of this comes down to trust—companies responsibly using location data should be transparent about how they use those data, how and when they'd be shared (if at all), and be diligent about deleting data they don't need from their systems. Similarly, consumers require assurances that what data you do collect will be protected, and won't allow other parties to use those data in undesirable ways, like knowing when someone is on vacation or where their kids go to school.

Customers also need to see clear, demonstrable value from any location data they do share. Spamming them with offers when they passed by your store two days ago, or sending push notifications to everyone within a given range independent of their purchase history or other factors won't win much loyalty over time, and will likely limit the reach and utility of any location-based strategies you are considering.

Really real-time

Knowing where someone is holds little value if you can't do something with that information right there and then — location-based features, notably customized personalization, requires legitimate real-time information and the ability to act on it. Few organizations have the data, systems, and organizational structures to pull this off, which is why contemplating machine learning or AI technologies is pointless unless you've got this figured out and running well. Your IT organization has its hands full as data sources continue to grow and evolve, necessitating solutions that can bring diverse sources from CRM and sales

data, to social media, and IoT devices all together in a single location that can provide detailed, highly segmented views of your customers.

In the meantime, tune your eyes and ears to your organization — structural barriers are often the largest when it comes to leveraging data in a real-time fashion. Beyond the widening talent gap for people who are skilled at data science and analytics, the culture and effectiveness of your organization pose huge risks of impeding your progress. We touched on this in the previous section, but for an even more in-depth look at building a data culture at your organization, see this report from Mike Barlow. One critical question Barlow addresses is "Are top and middle managers ready to push their decision-making authority out to people on the front lines?" Real-time data require an entirely different operational model (and supporting culture) where decision-making is pushed out to the edge, away from the purview of top and middle-level decision makers. An organization that has thrived on centralized, command-and-control methods in the past will struggle significantly if it focuses on technology and data first, and people and processes second (or worse, even later).

But seriously, what about ML and AI?

We're not saying you shouldn't be taking a serious look at these technologies for your business — simply be clear about having a solid foundation in customer experience, organizational culture, and data management first and foremost. All of those things are ultimately about people, which should remain your focus even as you experiment with new approaches and examine if and how ML, AI and other emerging technologies can help your business. In the 2017 Price Waterhouse Cooper Digital IQ report, the authors underscored the need to focus on people, stating "As you experiment with emerging technology, don't shortchange the customer or employee experience. You can develop a digital product that leverages AI, for example, but have you sufficiently thought through issues like whether you've created the necessary trust and transparency your customers and employees need, so your innovation becomes indispensable?"

While it's easy to jump to dystopian scenes of stores staffed entirely by robots, the near-term prospects for machine learning and AI are much more likely to focus on bringing the online experience offline, into physical stores. Not surprisingly, purely online eCommerce companies have an advantage when it comes to supply chain management, forecasting, and tracking customer behavior: websites are easily instrumented to track and take advantage of every click, swipe, and view. (They also benefit from not having numerous physical locations, though this presents a host of other challenges that brick-and-mortar outfits don't necessarily have.) ML and AI present opportunities in both cost-cutting (inventory management and supply chain optimization) and revenue generation (product placement, layout, and merchandising). Once retailers undertake the efforts to instrument their physical locations with sensors, cameras and the like, they can take advantage of a host of fairly similar activities as their online counterparts. Cameras that track where people go can help optimize layouts and adjust as patterns change, along with indicating high-traffic areas where product promotion could have the most impact. Analyzing purchasing and marketing data could lead to optimizing orders and placement for certain products based on seasonal or other patterns, and potentially experimenting with automating some of those decisions, e.g. when to restock and when to discount and sell through.

Conclusion

Steve Jobs once said "Technology is nothing. What's important is that you have a faith in people." As you look to digitally transform your organization, start with the people — your employees, customers, and partners. The technologies and tools you choose should empower and inspire them first and foremost. By empowering your people with the tools to experiment and learn quickly and iteratively, you hold the key to unlocking endless innovation and growth.

Get in touch

sales@fastly.com

+1 (844) 4FASTLY

www.fastly.com

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